

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 7 and 10 have been canceled, and claims 1, 8, and 9 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1, 2, 4-6, 8, and 9 are pending and under consideration. Reconsideration is requested.

ENTRY OF AMENDMENT UNDER 37 C.F.R. §1.116:

Applicant requests entry of this Rule 116 Response because:

- (a) it is believed that the amendment of claims 1 and 9 puts this application into condition for allowance as suggested by the Examiner;
- (b) the amendments were not earlier presented because Applicant believed in good faith that the cited prior art did not disclose the present invention as previously claimed;
- (c) the amendment of claim 1, 8, and 9 should not entail any further search by the Examiner, since no new features are being added or no new issues are being raised
- (d) the Examiner cited a new reference (Frantz et al., U.S. Patent No. 5,935,379); and
- (e) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

ALLOWABLE SUBJECT MATTER:

In the Office Action, at page 5, item 5, the Examiner indicated that claims 7, 8, and 10 would be allowable if rewritten in independent form. Applicant respectfully submits that the subject matter of claims 7 and 10 has been incorporated into independent claims 1 and 9, respectively, and that independent claims 1 and 9 are now allowable. Additionally, Applicant respectfully submits that claims 2, 4-6, and 8, which ultimately depend from independent claim 1, are also now allowable.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action, at page 2, item 2, the Examiner rejected claims 1-2 and 9 under 35 U.S.C. §103(a) as being unpatentable over Silvasi (U.S. Patent No. 6,626,579 – hereinafter Silvasi) in view of Frantz et al. (U.S. Patent No. 5,935,379 – hereinafter Frantz). The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicant traverses this rejection and respectfully requests reconsideration.

In the Office Action, at page 3, item 3, the Examiner rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over Silvasi and Frantz in view of Kenji (JP 2001221243A – hereinafter Kenji). The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicant traverses this rejection and respectfully requests reconsideration.

In the Office Action, at page 4, item 4, the Examiner rejected claims 5 and 6 under 35 U.S.C. §103(a) as being unpatentable over Silvasi and Kenji, and further in view of the Prior Art drawing Fig. 5. The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicant traverses this rejection and respectfully requests reconsideration.

Initially, It is to be noted that simplicity and hindsight are not proper criteria for resolving the issue of obviousness. (See Ex parte Clapp, 227 USPQ 972, at 973 (B.P.A.I. 1985)).

Additionally, the determination that a reference is from a non-analogous art is twofold. First, it is determined whether the reference is within the field of the inventor's endeavor. If it is not, it is determined whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. (See In re Wood, 202 USPQ 171, at 174 (C.C.P.A. 1979)).

Further, it is necessary "to consider 'the reality of the circumstances'... - in other words, common sense - in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor. (In re Oetiker, 24 USPQ 2d 1443, 1446 (Fed. Cir. 1992)).

The field of the inventor's endeavor in the subject application is "a wheel support bearing assembly for supporting a wheel that is used in, for example, an automotive vehicle and, more particularly, to the wheel support bearing assembly that is coupled with a knuckle made of an aluminum alloy and designed to have a reduced weight." (Page 1, lines 5-9 of the subject Specification).

But the device disclosed in Frantz "relates to a heat seal wheel for use with a heat sealing apparatus associated with a continuous packaging machine, for forming a longitudinal seal in a flat sheet of flexible film." (Frantz, col. 1, lines 6-9).

Applicant respectfully submits that Frantz is not within the field of the subject inventor's endeavor.

The claimed invention of the subject application involves a wheel support bearing assembly rotatably supporting a wheel relative to a vehicle body structure. An electrically insulating layer is provided at a surface area of contact between a steel outer member of a bearing and a knuckle made of an aluminum alloy that is connected to the vehicle body structure, to prevent electrocorrosion between the outer member and the knuckle.

Frantz, however, discloses a sealing apparatus 20 to form a longitudinal seal in a flat sheet of flexible film. (See Frantz, at col. 1, lines 8-9). The sealing apparatus 20 has a heating element 33 disposed between a thick thermal insulating block 35 and a bearing disk 34. The bearing disk 34 is disposed between the heating element 33 and a seal wheel 31. (See Frantz, at FIG. 3B). The heating element 33 is made up of an electrical resistance layer 40 sandwiched between two layers of thermally conductive synthetic resin 41 to electrically isolate the resistor element 40 of the heater 33. (See Frantz, at FIG. 3D and col. 3, lines 50-54). The seal wheel 31, is heated using heat generated in the electrical resistance layer and transferred to the seal wheel 31 via the synthetic resin 41 and the bearing disk 34. (See Frantz, at col. 3, lines 47-48, and col. 4, lines 10-15).

In operation, seal wheel 31, forms a longitudinal seal in a running flat sheet of flexible film and trims away waste in a single operation, similar to the seal wheel 11, which Frantz refers to as Prior Art. The seal wheel 31, however, was designed to avoid problems of the prior art, namely: waste material trimmed from the sealed flexible film does not melt and stick to the seal wheel structure since the heating element 33 is disposed within the thick thermal insulating block 35; and the waste material does not wrap around the seal wheel structure, since only the seal wheel 31, and not the insulating block 35, rotates. (See Frantz, at col. 5, lines 1-5).

Applicant respectfully submits that of ordinary skill in the art could not reasonably be expected to look to a sealing apparatus that forms a longitudinal seal in a flat sheet of flexible film and prevents operational waste from sticking to and/or wrapping around the sealing apparatus, to prevent electrocorrosion between an outer member and a knuckle of a wheel support bearing assembly.

Accordingly, Applicant respectfully submits that one of ordinary skill in the art would not be motivated to combine the teachings of Silvasi and Frantz, because Frantz is non-analogous art.

Further, the Examiner's stated reasoning for combining Silvasi and Frantz is to "reduce thermal conduction of heat in the wheel support bearing assembly thereby preventing failure." Silvasi relates to an anti-corrosion member adapted for use in a vehicle wheel end assembly vehicle wheel end assembly. The purpose of the anti-corrosion member is to prevent galvanic corrosion between the steel bearing unit and the aluminum steering knuckle. (See Silvasi, at Abstract). There is no indication that the anti-corrosion member has anything to do with reducing thermal conduction of heat.

Assuming *arguendo*, however, that Frantz is analogous art, Applicant submits that a hypothetical combination of Silvasi and Frantz would not result in the claimed invention.

Independent claim 1 recites: "...an electrically insulating layer provided at a surface area of contact between the outer member and the knuckle, the electrically insulating layer consisting of a coating layer functioning as an electric insulator...."

And independent claim 9 recites: "...an electrically insulating layer provided at a surface area of contact between the outer member and the knuckle, the electrically insulating layer comprising a plated ply with a chromate treated layer thereon, and a coating layer functioning as an electric insulator...."

The Examiner states that Silvasi discloses all of the features of the independent claims except an electrically insulating layer consisting of a coating functioning as an electric insulator that is received in the knuckle, and one of axial end faces of the vehicle body mounting flange confronting the knuckle. In asserting that Frantz cures this defect, the Examiner appears to assert that the heating element 33, correlates to the insulating layer 17 of the subject application, and that the electrical resistance layer 40, and the thermally conductive and electrically insulating material (hereinafter synthetic resin) 41, correlate to both the coating ply alone, and

the combination of the plated ply and coating ply of the subject application. Applicant respectfully disagrees.

Frantz recites: “[e]lectrical resistance heating of planar heating element 33 is accomplished by an electrical resistance layer 40 sandwiched between two thin sheets 41 of thermally conductive and electrically insulating materials, with the flow of current occurring in the plane of the layer.” (Frantz, col. 4, lines 17-22). Thus, the only embodiment of the heating element 33 disclosed in Frantz necessarily comprises both the electrical resistance layer 40 and the pair of synthetic resin layers 41.

Accordingly, Applicant respectfully submits that neither Silvasi nor Frantz, either alone or in combination, disclose or suggest an electrically insulating layer provided at a surface area of contact between the outer member and the knuckle, the electrically insulating layer consisting of a coating layer functioning as an electric insulator.

Further, since neither the plated ply with a chromate treated layer thereon, nor the coating layer functioning as an electric insulator (as claimed in claim 9) is an electrical resistance layer to generate heat, Applicant respectfully submits that neither Silvasi nor Frantz, either alone or in combination, disclose or suggest an electrically insulating layer provided at a surface area of contact between the outer member and the knuckle, the electrically insulating layer comprising a plated ply with a chromate treated layer thereon, and a coating layer functioning as an electric insulator.

Further, Applicant respectfully submits that the subject matter of claims 7 and 10, which the Examiner indicated as being allowable if rewritten in independent form, has been incorporated into independent claims 1 and 9, respectively, and that independent claims 1 and 9 are now allowable. Additionally, Applicant respectfully submits that claims 2, 4-6, and 8, which ultimately depend from independent claim 1, are also now allowable for at least the same reasons as claim 1, as well as for the additional features recited therein.

CONCLUSION:

In accordance with the foregoing, Applicant respectfully submits that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the cited art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

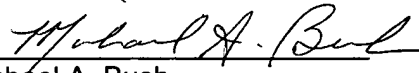
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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